

COASTAL CONSERVANCY

Staff Recommendation
September 25, 2008

LOWER SANTA YNEZ RIVER RESTORATION FEASIBILITY STUDY

File No. 08-087-01
Project Manager: Rachel Couch

RECOMMENDED ACTION: Authorization to disburse up to \$90,000 to Audubon California to assess potential restoration actions to enhance the ecological functions of the lower Santa Ynez River, Santa Barbara County.

LOCATION: Santa Ynez River watershed, Santa Barbara County

PROGRAM CATEGORY: Coastal Resource Enhancement Project

EXHIBITS

Exhibit 1: [Project Location and Site Map](#)

Exhibit 2: [Audubon Important Bird Areas Designation](#)

Exhibit 3: [Project Letters](#)

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251-31270 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of up to ninety thousand dollars (\$90,000) to Audubon California for preparation of a feasibility study to assess potential restoration actions to enhance the ecological functions of the Lower Santa Ynez River, subject to the following condition that prior to the disbursement of funds, the Executive Officer of the Conservancy shall approve in writing a work program, budget, schedule and any contractors to be employed for these tasks and evidence that Audubon California shall provide all remaining funds needed to complete the study.”

Staff further recommends that the Conservancy adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project is consistent with the purposes and objectives set forth in Chapter 6 of Division 21 the Public Resources Code (Section 31251-31270) regarding enhancement of coastal resources.

2. The proposed project is consistent with the Project Selection Criteria and Guidelines last updated by the Conservancy on September 20, 2007.
 3. The Santa Ynez River and estuary have been identified in the Certified Local Coastal Program of Santa Barbara County as environmentally sensitive habitat areas which should be preserved and restored.
 4. Audubon California is a nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the Public Resources Code.”
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PROJECT SUMMARY:

Audubon California seeks funding to prepare a feasibility study for the restoration of willow riparian (500 acres) and tidal marsh habitat (250 acres) in the lower Santa Ynez River and estuary. The plan will identify the first phase of estuary restoration that will help guide long term river restoration efforts. Audubon California intends to enhance the ecological value for migratory and wintering waterfowl and shorebirds and endangered species including southwestern willow flycatcher and southern steelhead trout.

As part of a state-wide review, Audubon California recognized the lower Santa Ynez River’s value to birds by designating portions as Important Bird Areas (IBAs): Vandenberg Air Force Base (VAFB) IBA, and Santa Ynez River Valley IBA. The 20-mile stretch of lower river, dominated by dense willows and scattered cottonwoods from Buellton to Lompoc, was designated as an IBA for supporting a significant population of federally endangered southwestern willow flycatchers (7-12 territories have been detected in past two decades), in addition to supporting 10 sensitive bird species, including least Bell’s vireo (state and federally endangered) and other species associated with the bottomland riparian woodland. This area supports one of the most significant and little-studied riparian systems in central California, and one of the two best examples of lowland riparian habitat in Santa Barbara County. VAFB IBA includes several habitats across the base: tidal marsh and mudflats at the mouth of the Santa Ynez River host hundreds of migrant and winter waterbirds and support several breeding colonies; riparian and freshwater marsh birds breed in small numbers in the riparian willow forest.

Designation as an IBA is supported by ongoing avian monitoring and research targeted at sensitive species. Over the last decade studies have been conducted by University of California - Santa Barbara (for Savannah sparrows and willow flycatchers), VAFB staff and contractors (federally threatened western snowy plovers and federally endangered California least terns), and Point Reyes Bird Observatory (PRBO) Conservation Science (roost utilization of endangered brown pelicans, endangered least terns, double-crested cormorants, and other important seabirds). Volunteer bird counts are organized through La Purisima Audubon’s Christmas Bird Count (1988 to present) and occasional field trips.

Restoration of the lower three miles of river within VAFB could potentially restore the natural meandering capacity of the river, rehydrate upland areas to enhance riparian habitats, reduce sedimentation within and conversion of the brackish marsh to upland habitat, and reduce scouring within the main river channel. A unique opportunity exists for VAFB and the City of

Lompoc to restore a rare ecosystem in coastal California and improve habitat for rare and declining estuarine and riparian dependent species. Furthermore, restoration could increase opportunities for local citizens and tourists to appreciate the river and estuary through fishing, bird watching, environmental education, and other activities.

Audubon California and its partners would assess the potential restoration actions to enhance the ecologic functions of the lower Santa Ynez River. The feasibility study will identify and prioritize restoration and management actions. Audubon will collaborate with a number of partners, including: VAFB, La Purisima Audubon, Army Corps of Engineers, City of Lompoc, the Regional Water Quality Control Board, and the Conservancy among others. Audubon California will partner with VAFB biologists, PRBO Conservation Science, and UC Santa Barbara to implement a year-round monitoring and community outreach program.

The feasibility study will determine whether removing the remaining berm and accumulated sediment will allow the river downstream to inundate the higher marsh areas, particularly during flood events, thereby returning the marsh to the more historic middle marsh function, with areas of shallow-ponded water and regrowth of *Salicornia*. Restored areas may create a series of channels at different stages of scouring, providing estuarine conditions to support a broader array of species, especially southern steelhead, Savannah sparrows, migratory/overwintering shorebirds, and waterfowl.

Audubon California was formed in 1997 as a field program of National Audubon Society, part of an effort to build a stronger link between Audubon's national and local conservation activities. Audubon California is responsible for accomplishing its mission of protecting birds and other wildlife and the habitat that supports them within California. Audubon California is a well-established statewide organization that works closely with local Audubon chapters in implementing projects and is well qualified to carry out the proposed project.

Site Description:

Flowing out of the Los Padres National Forest in the Santa Ynez Mountains, the Santa Ynez River traverses 75 miles through the Santa Ynez Valley, terminating in a rich estuary just north of Point Conception in Santa Barbara County. Through the Lompoc Valley, the Santa Ynez River meanders through agricultural lands before reaching VAFB. The willow riparian forest is relatively narrow and degraded through the agricultural area and begins to broaden in its last three miles. Just before reaching the ocean, the Santa Ynez River forms a tidal estuary. The estuary terminates in a broad sandy beach that occasionally forms a tidal barrier, breached by winter storms and heavy river flows. The rich fluctuating tidal flats and marsh create habitat conditions for migratory and wintering shorebirds, waterfowl, and seabirds, as well as breeding areas for salt marsh dependent Savannah sparrows.

The Santa Ynez River basin is the most important basin in Santa Barbara County because it is the primary source of water for about two-thirds of the county's residents. Water management issues in the basin include flood problems and limited water supplies for both human and wildlife needs. Three dams have been constructed on the river to impound water and include the large reservoir, Lake Cachuma. The majority of the basin is within the Los Padres National Forest. In Santa Ynez Valley, private lands are dominated by horse farms and crops including

wine grapes and forage crops. The valley west of Lompoc is used for growing irrigated crops, where marine influences allow year-round production.

From Lompoc the river flows through Lompoc Valley. The US Federal (Lompoc) Penitentiary and VAFB border the north side of the river for approximately 5 miles, while the south side is a mosaic of privately owned, irrigated, agricultural fields until the river reaches the 13th Street bridge. For the last three miles of river, VAFB owns the willow-dominated floodplain, the river channel, the tidal marsh and estuary, and most of the sandy beach. The 20-acre Ocean Beach Park on the south side of the river, managed by the Santa Barbara County Parks Department, allows public access (however, access to the beach is limited during the snowy plover nesting season).

The last mile of the lower Santa Ynez River is classified as a “lagoonal estuary” because the river mouth is closed by sandbars for most of the year. It consists of brackish marsh, and salinities can approach fresh water levels depending on whether the sandbar is open or closed. The estuary generally opens to tidal influence as a result of late winter and early spring storm runoff. A sand bar forms at the river mouth in summer, blocking salt water intrusion until winter storm surges and increased flows allow it to breach. Prior to breaching, the estuary fills with brackish water and estuarine habitats become inundated, creating a deeper lagoon.

Major wetland types in the estuary are estuarine middle salt marsh and palustrine saline marsh, along with channels, mudflats, and sandbars. The predominant vegetation is pickleweed, with some areas of alkali heath, jaumea, and saltgrass. The channels and large upstream freshwater marshes contain emergent vegetation, including California bulrush, prairie bulrush and cattails. This dynamic estuary supports extensive wetland resources and endangered species (tidewater goby, southern steelhead trout, brown pelican, least tern, and Western snowy plover).

The tidal flats that are exposed create ideal feeding conditions for shorebirds and the tidal channels and lagoon created by the closed river mouth create deeper water areas used by brown pelicans and feeding terns (including the least tern). In 2007, the estuary supported breeding pairs of redhead and eared grebes, outside of their normal ranges, and many other waterfowl.

The broad, sandy beach at the river mouth provides ideal nesting habitat for one of the state’s largest populations of breeding and wintering snowy plovers (federally threatened). Least terns (federally endangered) use the river mouth as a post-nesting roost site. The beach also provides wintering habitat for several species of migratory shorebirds and a significant roost site for brown pelicans (federally endangered) during the summer and fall.

Upstream from the tidal marsh, the river is flanked, primarily on the north side by approximately 500 acres of riparian forest consisting of dense willow forests, which transition laterally to willow riparian and coastal sage scrub. Riparian habitat narrows considerably after the 13th Street bridge. As recently as 2003, these forests have supported breeding southwestern willow flycatchers (federally endangered), and other riparian songbird species.

Project History:

The Santa Ynez River has been impacted by human agricultural and river management practices for more than 150 years. Historically, the river meandered and created new channels in the

Lompoc Valley which are still visible in aerial photographs. Early in the 20th century, building of dams upstream, channel dredging and conversion of riparian habitat to agriculture began to alter the dynamics of the river and limit its ability to meander. The result was a decline in riparian vegetation. Construction of three bridges with berms on the river's lower three miles (Union Pacific Railroad, 35th Street, and 13th Street bridges) likely contributed to altered flow and increased sedimentation. The resulting river channel is straighter and deeper with reduced overbank flooding and recharge of upland habitats. The latter has been exacerbated by ground water withdrawal and diversion along the river.

Alterations or degradation of habitats for bird species in the lower river have been observed in recent decades. In 1940, a bridge across the lower Santa Ynez River was built by Army Corps of Engineers one mile upstream from the mouth at 35th Street. On either side of the bridge, a berm was constructed within the salt marsh to reduce saltwater intrusion to agricultural lands upstream. The bridge subsequently washed out in 1969 and has been left in disrepair. The remaining cement berm on both sides of the river channel has created a build-up of sand and debris, contributing to restricted water flow into tidal marshes and riparian areas, and resulted in the loss of the natural meander, scour, and flush typical where rivers merge with estuaries. Accumulated sediment has transformed roughly palustrine and middle marsh into dry areas dominated by exotic vegetation (including poison hemlock, fennel, black mustard, iceplant and Italian rye). The alluvium build-up has reduced persistent wetlands and contributed to altered ecological functions.

The largest affected area covers approximately 80 acres on the south side of the river, although some effects are also apparent on the north side of the river. Studies in the 1990's on Savannah sparrows (UC Santa Barbara), a marsh dependent species, have shown that sedimentation and conversion of habitats have resulted in this species, as well as other animals, avoiding these areas. Despite the presence of *Salicornia*, biologists found no meaningful biological activity in these sedimented marshes and impounded parts of the estuary. Savannah sparrows rely on annual flooding, natural scouring, and hydric soils for feeding and breeding. Reduced surface water to the riparian forest has likely contributed to the decline in willow flycatchers and other riparian dependent birds in the area.

PROJECT FINANCING:

Coastal Conservancy	\$90,000
The Nature Conservancy	\$10,000
Packard Foundation	\$7,750
Santa Barbara Foundation (pending)	\$25,000
Toyota	\$46,000
<u>In-kind</u>	<u>\$21,250</u>

Total Project Cost

\$200,000

The anticipated source of Conservancy funds for this project is an appropriation to the Conservancy of funds from the Water Security, Clean Drinking Water, Coastal and Beach

Protection Act of 2002 (Proposition 50), which authorizes the use of such funds to protect coastal watersheds through projects that restore land and water resources. The proposed project will accomplish those objectives by providing information on the feasibility of specific actions to restore threatened and endangered species habitat and natural sediment management in the lower Santa Ynez River watershed.

As required by Proposition 50, the proposed project is consistent with regional water quality plans (Water Code Section 79570), as described in the Consistency with Local Watershed Management Plan/State Water Quality Control Plan section below, and includes monitoring.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

This project would be undertaken pursuant to Chapter 6 (Sections 31251-31270) of the Conservancy's enabling legislation, Division 21 of the Public Resources Code, regarding enhancement of coastal resources. In establishing the Coastal Conservancy, the Legislature found that important fish and wildlife habitat and environmental resources within the coastal zone have been degraded by the impacts of incompatible land uses (Public Resources Code Section 31053), and authorized the Conservancy to award grants to nonprofit organizations to enhance coastal resources that have suffered the loss of natural values because of the improper location of improvements or incompatible land uses (Public Resources Code Section 31251). Consistent with these provisions, the proposed project would lead to improvements in the quality and availability of habitat in the lower Santa Ynez River watershed for the benefit of several endangered species including tidewater goby, southern steelhead trout, brown pelican, least tern, southwestern willow flycatcher and western snowy plover.

The proposed project will help restore biological functions within the lower three miles of the Santa Ynez River for sensitive, threatened and endangered species.

The proposed project is consistent with the Santa Barbara County Local Coastal Program as described in the Consistency with Local Coastal Program Policies section below.

CONSISTENCY WITH CONSERVANCY'S 2007 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 5, Objective A** of the Conservancy's 2007 Strategic Plan, the proposed project will develop a plan for the restoration and enhancement of coastal habitats including coastal wetlands and intertidal areas and riparian corridors.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on September 20, 2007, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** The project has the support of state and local elected officials including Assemblymember Pedro Nava, public agencies including Vandenberg Air Force Base, Army Corps of Engineers, City of Lompoc, Department of Fish and Game, and the Regional Water Quality Control Board.
4. **Location:** The proposed project would be located within the coastal zone of Santa Barbara County.
5. **Need:** While Audubon California has obtained in-kind commitments and matching funds from public agencies and partnering organizations, Conservancy assistance is needed at this point to enable the initial planning phase to move forward. Additional funding for the project is pending.
6. **Greater-than-local interest:** The Santa Ynez River system is a critical water supply source for Santa Barbara County and is designated critical habitat for the federally endangered southern steelhead, southwestern willow flycatchers, and numerous other sensitive species (see "Site Description" section above). Audubon California designated portions of the lower Santa Ynez River as Important Bird Areas (IBAs). The proposed project area includes portions of both VAFB IBA, and Santa Ynez River Valley IBA.

Additional Criteria

7. **Urgency:** The riparian forest has suffered from reduced surface water which has likely contributed to the decline in endangered willow flycatchers and other riparian dependent birds in the area. A determination of the feasibility of restoration for this area is needed to reverse this trend. A unique opportunity exists to restore a rare ecosystem in coastal California and improve habitat for rare and declining estuarine dependent species.
8. **Leverage:** See the "Project Financing" section above.
9. **Innovation:** The project will demonstrate the value and feasibility of removing obsolete structures to restore the natural meandering capacity of three miles of river, rehydrate upland areas for riparian habitats, reduce sedimentation within and conversion of the brackish marsh to upland habitat, and reduce scouring within the main river channel. The project will also involve an innovative citizen monitoring component through cooperation among project partners.
10. **Readiness:** Audubon California has demonstrated that it has the expertise, local public support, and administrative capability necessary to commence the project in 2009.
11. **Cooperation:** Partners in this project include the Army Corps of Engineers, City of Lompoc, Department of Fish and Game, Regional Water Quality Control Board and local citizens.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The proposed project is consistent with the planning and management policies of the Coastal Act (Division 20, Public Resources Code, Sections 30000 *et seq.*). The project would identify possible improvements to the lower Santa Ynez River watershed and estuary, which supports extensive wetland resources. Although all but approximately the last mile of the Santa Ynez River lies outside the coastal zone, river and land uses outside of the coastal zone have an effect on coastal zone resources. This is especially true of species such as the anadromous southern steelhead, an ocean-going species that relies on the entire river system to complete its life cycle. The project is intended to protect and enhance critical habitat for several endangered species of birds and fish, including southwestern willow flycatchers, southern steelhead trout, tidewater goby, brown pelican, least tern, and western snowy plover.

Public Resources Code Section 30231 states, “The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes . . . shall be maintained and, where feasible, restored. . . .” This project is intended to lead to habitat enhancement for a wide variety of species dependent upon the lower Santa Ynez River watershed.

The project is consistent with the certified Local Coastal Program (LCP) of Santa Barbara County. Section 3.9.2 of the LCP describes environmentally sensitive habitat areas as including those areas in which plant or animal life or their habitats are rare or especially valuable because of their special nature or role in an ecosystem. Section 3.9.2 specifically identifies as environmentally sensitive “rare and endangered species habitats” and “specialized wildlife habitats which are vital to species survival.” Such habitats are to be preserved and protected. Improvement of habitat for several species of sensitive, threatened and endangered species is the goal of this project.

Section 3.3.4 of the LCP notes that watersheds “have potential for impacts on coastal streams, wetlands, [and] estuaries,” and states that protection of watersheds is necessary to “insure continued biological productivity of coastal streams and wetlands.” Thus, although a portion of the project area of this recommendation is not in the coastal zone, the project is consistent with LCP policies calling for protection of entire watersheds because of their hydrologic and biologic links to coastal zone resources.

CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN/ STATE WATER QUALITY CONTROL PLAN:

The proposed project is consistent with and will help implement the *Lower Santa Ynez River Fish Management Plan* designed to improve habitat for endangered southern steelhead trout. In 1997, the Santa Ynez River was included in the designation of critical habitat for the southern steelhead, after its listing as a federally endangered species. Southern steelhead are anadromous and pass through the project area during migration to and from the Pacific Ocean.

As required by Proposition 50, the proposed project is consistent with local and regional plans (Water Code Section 79570). Because the project will facilitate the restoration of fish and wildlife habitat in coastal watershed and wetlands, the project is consistent with the Water Quality Control Plan for the Central Coastal Basin (adopted by the Regional Water Quality Control Board Central Coast Region in 1994 and reviewed every three years) in that it will

further the following beneficial use objectives; estuarine habitat; wildlife habitat; rare, threatened or endangered species; and migration of aquatic organisms.

COMPLIANCE WITH CEQA:

The proposed project is statutorily exempt from the California Environmental Quality Act (CEQA), pursuant to Chapter 14 of the California Code of Regulations Section 15262. Consistent with Section 15262, the project will only involve preparation of planning documents and feasibility studies and will consider environmental factors. Upon approval, staff will file a Notice of Exemption for this project.